

Application No. 09/997,682
Amendment dated April 15, 2004
Reply to Office Action of January 15, 2004

REMARKS/ARGUMENTS

Responsive to the Official Action mailed January 15, 2004, applicant has revised the claims of his application in an earnest effort to place this case in condition for allowance. Specifically, claim 7 has been canceled, and claims 1, 6, 19, and 21 amended. Reconsideration is respectfully requested.

In connection with the Examiner's Requirement for Election, applicant notes that claim 2 was inadvertently identified as reading on the elected species of Figure 1. Applicant regrets this inadvertent identification.

In rejecting the claims under 35 U.S.C. §112, the Examiner noted a number of informalities in the claim language. Applicant has taken care to revise these informalities in accordance with the Examiner's comments. It is believed that this rejection can now be withdrawn.

In rejecting the pending claims under 35 U.S.C. §102 and §103, the Examiner has relied upon commonly applied U.S. Patent No. 6,568,049, to Putnam, U.S. Patent No. 6,487,762, to Fleissner, commonly assigned U.S. Patent No. 6,314,627, to Ngai, and U.S. Patent No. 4,069,563, to Contractor et al. As set forth in the amended claims, it is believed that applicant's novel method is patentably distinct from these references, even when combined, and accordingly, the Examiner's rejections are respectfully traversed.

By this response, applicant has revised the pending claims to more particularly recite his novel lamination process, wherein two or more nonwoven fabric layers are joined together to form a degradable laminate nonwoven fabric having regions of dissimilar bundling. Notably, and in significant distinction from the prior art, applicant's method contemplates the use of a plurality of jet clusters or groupings, each of which includes a plurality of high pressure jet orifices for effecting hydroentanglement at discrete regions

spaced transversely of the machine direction of the laminate construct. Notably, lamination in this fashion is effected without resort to *masks, screens, or templates*, which are positioned to block liquid streams from an orifice strip, as characterized by the prior art.

Applicant's claims have been extensively revised to specify fabric formation by this technique. The present method contemplates providing a manifold having a plurality of jet clusters, each including a plurality of individual jet orifices separated from each other by a first distance. The jet clusters, in turn, are spaced apart, *transversely of the machine direction*, by a second distance which is greater than the first distance. The resultant laminate fabric has regions of dissimilar bundling, wherein the regions are spaced apart from each other, transversely of the machine direction, *by an amount corresponding to the second distance, that is, the transverse spacing of the jet clusters*.

As claimed, the present method is clearly distinct from the cited, commonly-assigned Putnam reference. As stated at column 3, lines 43 *et seq.*:

In this embodiment of the seaming process, barrier templates 18 are created which have a pre-defined pattern of openings 20 therethrough, the openings 20 defining the desired seam lines to be created in the underlying stacked webs 20, 24 being processed through the hydroentangling station 14. . . . Thus, only sections of the stacked webs which do not underlie the templates 18 (or underlie the openings 20 therein) are accessible by the jets 16 to create entangled seam lines therealong.

Figure 4 of Putnam shows an example of an alternative porous drum 30 which may be used to define the seam lines.

It is noted that the cited Fleissner patent contemplates a similar processing technique. As stated at column 2, lines 65 *et seq.*:

Endless belt 12 or the corresponding drum can be made of a braided fabric or be made of a sheet perforated with a desired pattern. It is only at the holes in the endless belt 12 that are open to allow the water to pass through or in the drum that the

fibers of nonwoven 5 can move into web 8. Consequently, it is only at these places on the back of the web 8 that the fiber composition can change that produced the desired pattern.

It is respectfully maintained that the present claims are clearly distinct from the commonly-assigned Ngai reference. This reference contemplates the lamination of webs by hydroentanglement, wherein a first hydroentangled web 14, having a "structured surface", is positioned on one side of a nonwoven web 40 "that is substantially impervious to solids or semi-solids" (column 5, lines 5-6), with a second structured surface web 30 positioned on the opposite side of the web 40. It is respectfully maintained that this reference does not anticipate the present invention, and accordingly, it is respectfully requested that this rejection be withdrawn.

The Examiner has relied upon the teachings of Contractor in further rejecting the pending claims, but it is respectfully maintained that this reference does not teach or suggest applicants' method as set forth in the amended claims. Applicant notes Figure 3 of Contractor referenced by the Examiner, wherein staggered rows of orifices are illustrated in body 16. Clearly, this reference does not teach or suggest the formation of a fabric having regions of dissimilar bundling spaced apart, transversely of the machine direction, by a distance corresponding to the transverse spacing of jet clusters, which distance is greater than the relative spacing of the jet orifices. In fact, formation in this fashion is contrary to the teachings of Contractor, which discusses, at column 2, lines 47 *et seq.*, the undesirable effects of jet-track patterning, and the resultant non-uniform entanglement. Thus, this reference clearly fails to overcome the deficiencies in the teachings of Fleissner in teaching or suggesting applicant's invention as claimed.

In view of the foregoing, formal allowance of claims 1, 6, 8, and 15-21 is believed to be in order and such action is respectfully solicited. Additionally, since it is believed that a

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number of applicants' claims are generic to his various disclosed embodiments, it is respectfully requested that the withdrawn claims be reinstated.

Should the Examiner wish to speak with applicant's attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **April 15, 2004**.


